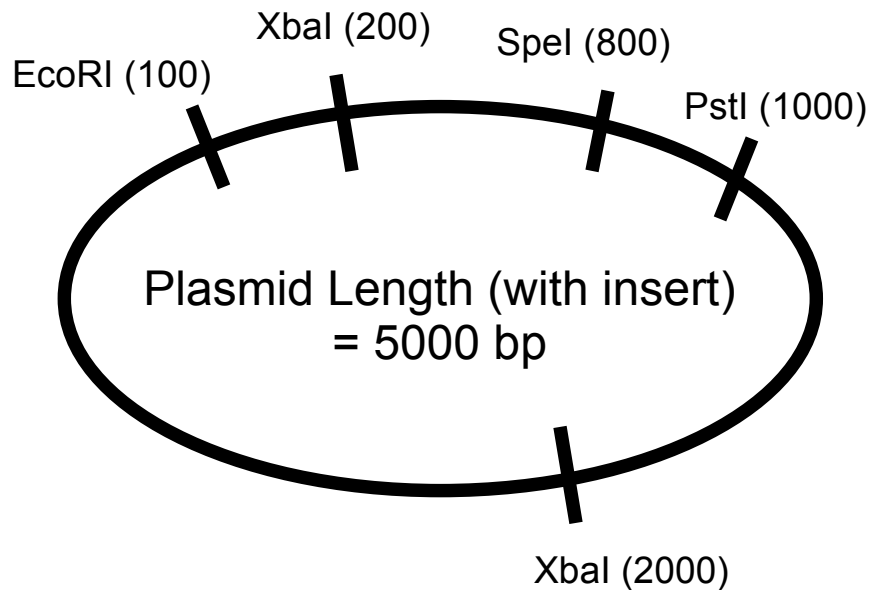


Quiz #2 (1 Question) – 10 Minutes

Last session we discussed restriction endonuclease digests of DNA and the separation of various size DNA by gel electrophoresis. Answer the following questions.

- 1) Examine the circular plasmid drawn below and answer the following questions. The numbers correspond to the location of the basepairs where restriction enzymes cut the DNA.



- a. How many DNA fragments will result from digesting with...

- | | |
|--------------------------------|-------|
| i. EcoRI | _____ |
| ii. XbaI | _____ |
| iii. SpeI | _____ |
| iv. PstI | _____ |
| v. EcoRI & SpeI | _____ |
| vi. XbaI & PstI | _____ |
| vii. EcoRI, XbaI, SpeI, & PstI | _____ |

- b. Draw a representation of what these digests (part a: i-vii) would look like after being run on an electrophoresis gel shown below. Show the DNA fragments at the appropriate length and at the proper positions on the gel.

Please draw your own DNA markers ladder on the outside lanes for reference. Please label the lengths of the bands in the DNA ladder.

For extra credit, draw the uncut plasmid on the gel as well. Please label your gel lanes with the digest or ladder represented.

Label how the electrodes are setup with respect to the gel below. Where is the positive (red) electrode and where is the negative (black) electrode?

